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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,063	07/30/2003	David M. Kerxhalli	D/A1553	8195
25453	7590	09/27/2005	EXAMINER	
PATENT DOCUMENTATION CENTER XEROX CORPORATION 100 CLINTON AVE., SOUTH, XEROX SQUARE, 20TH FLOOR ROCHESTER, NY 14644			WALSH, RYAN D	
			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/630,063	<b>Applicant(s)</b> KERXHALLI ET AL.	
	<b>Examiner</b> Ryan D. Walsh	<b>Art Unit</b> 2852	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/23/2003</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: Page 8, Ln. 5 – Ref. #'s 34a, 34b, 34c, 34d, 34e, and 34f are in figure 5, not in figure 4; Page 12, Ln. 18 – Fig. 4 and Fig. 5 are not directed to correctly.

Appropriate correction is required.

### ***Claim Objections***

Claim 3 recites the limitation "the gross registration phase, the expanded chevron phase (if expanded chevrons are used), and the standard chevron phase of image on image setup" in lines 2-4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the residual error" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "inboard and outboard registration marks" in lines 5 and 6 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 17 recites the limitation "said color registration" and "the lateral target position of the marks is shifted relative to the MOB sensors" in lines 6 and lines 9-10 respectively of the claim. There is insufficient antecedent basis for these limitations in the claim.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "if expanded chevrons are used" renders the claim indefinite as it cannot be ascertained if the expanded chevron is part of the applicant's claimed invention. (Suggested replacement language can include "during a gross registration phase, or an expanded chevron phase, or a standard chevron phase of image on image setup.")

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 8, 9, 15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohki (US Pat. # 6,429,886).

Regarding claim 1, Ohki teaches, "A method for locating select images on a belt after an image on paper registration process, comprising: generating a test pattern; printing a test pattern (Col. 2, Ln. 26-31); measuring at least one test pattern parameter; using the at least one test pattern parameter to determine a lateral distance required to

shift an image to a desired location on the belt; shifting the image to the desired location (Fig. 9, and Col. 9, Ln. 30-50)."

Regarding claim 2, Ohki teaches, "wherein the at least one test pattern error includes a lateral magnification error and a lateral positional error (Col. 9, Ln. 40-50)."

Regarding claim 4, Ohki teaches, "further comprising detecting the residual error in the lateral location of the image after an image on image registration setup (Col. 9, Ln. 35-38); using the residual error in conjunction with the at least one test pattern parameter to determine the lateral distance required to shift an image to a desired location on the belt (Col. 9, Ln. 46-50)."

Regarding claim 8, Ohki teaches, "wherein residual error is set to zero after the method is performed (Col. 9, Ln. 30-50). "

Regarding claim 9, Ohki teaches, "wherein detecting the residual error in the lateral location of the registration mark is accomplished by a MOB sensor (Ref. Characters LSF and LSR)."

Regarding claim 15, Ohki teaches, "A method for repositioning a mark on a belt after an image on paper registration process, comprising: printing a test pattern (Col. 2, Ln. 26-31); measuring at least one test pattern parameter; detecting a mark on a belt and detecting at least one imaging error associated therewith; using the at least one test pattern parameter and the at least one imaging error to determine the lateral distance required to shift a particular image to a desired location on the belt; shifting the image to the desired location (Fig. 9, and Col. 9, Ln. 30-50)."

Regarding claim 16, Ohki teaches, "where an MOB sensor (Ref. Characters LSF and LSR) detects the at least one imaging error (Fig. 9, and Col. 9, Ln. 35-38)."

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohki (US Pat. # 6,429,886) in view of Omelchenko et al. (US Pat. # 6,275,244).

Regarding claim 3, Ohki teaches, "wherein the step of shifting the image to the desired location is done." Ohki does not teach, "during the gross registration phase, the expanded chevron phase (if expanded chevrons are used), and the standard chevron phase of image on image setup." However, during the gross registration phase, the expanded chevron phase (if expanded chevrons are used), and the standard chevron phase of image on image setup is routine in the art as shown by Omelchenko et al. (Col. 10, Ln. 29-59). It would have been obvious to one skilled in the art at the time the invention was made do modify Ohki's invention to include during the gross registration phase, the expanded chevron phase (if expanded chevrons are used), and the standard chevron phase of image on image setup.

The ordinary artisan would have been motivated to modify Ohki's invention in a manner described above for at least the purpose of avoiding misregistration on the belt during the registration process.

Regarding claim 6, Ohki does not teach, "wherein the method is used to shift both an inboard and an outboard registration mark of a reference color with respect to an inboard MOB sensor and an outboard MOB sensor respectively." However, having the method is used to shift both an inboard and an outboard registration mark of a reference color with respect to an inboard MOB sensor and an outboard MOB sensor respectively is routine in the art as shown by Omelchenko et al. (Col. 13, Ln. 2-8). It would have been obvious to one skilled in the art at the time the invention was made to modify Ohki's invention to include the method is used to shift both an inboard and an outboard registration mark of a reference color with respect to an inboard MOB sensor and an outboard MOB sensor respectively.

The ordinary artisan would have been motivated to modify Ohki's invention in a manner described above for at least the purpose of avoiding overlapping registration marks pertaining to specific colors, thus causing misregistration.

Regarding claim 7, Ohki teaches, "wherein the lateral distance required to shift an image to a desired location on the belt (Col. 9, Ln. 46-50)." Ohki does not teach, "to shift an inboard and outboard registration mark for every other color with respect to the inboard MOB sensor and the outboard MOB sensor respectively." However, having to shift an inboard and outboard registration mark for every other color with respect to the inboard MOB sensor and the outboard MOB sensor respectively is routine in the art as shown by Omelchenko et al. (Col. 13, Ln. 2-8). It would have been obvious to one skilled in the art at the time the invention was made to modify Ohki's invention to include

to shift an inboard and outboard registration mark for every other color with respect to the inboard MOB sensor and the outboard MOB sensor respectively.

The ordinary artisan would have been motivated to modify Ohki's invention in a manner described above for at least the purpose of avoiding overlapping registration marks pertaining to specific colors, thus causing misregistration.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohki (US Pat. # 6,429,886) in view of Inada (US Pat. # 6,452,147).

Regarding claim 5, Ohki does not teach, "where the image being shifted is a registration mark. " However, where the image being shifted is a registration mark is routine in the art as shown by Inada (see claim 5). It would have been obvious to one skilled in the art at the time the invention was made to modify Ohki's invention to include where the image being shifted is a registration mark.

The ordinary artisan would have been motivated to modify Ohki's invention in a manner described above for at least the purpose of adjusting the location of an image on a belt without adjusting the position of the belt.

Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inada (US Pat. # 6,452,147) in view of Omelchenko et al. (US Pat. # 6,275,244).

Regarding claim 10, Inada teaches, "A method for maintaining a registration mark in the scanline of a sensor, comprising: detecting the residual error in the lateral location of a registration mark after an image on image registration setup (Col. 3, Ln. 39-53), determining the lateral error between the actual positions (Col. 12, Ln. 31), determining the offset between the target location for the registration mark and the



actual location of the registration mark; combining the residual error, the lateral error, and the offset to determine the lateral correction needed to maintain the registration mark in the scanline of a sensor; using the lateral correction to offset the registration mark (Col. 3, Ln. 67 & Col. 4, Ln. 1-10).” Inada does not teach, “of the inboard and outboard registration marks and the positions desired for image on paper registration.” However, having of the inboard and outboard registration marks and the positions desired for image on paper registration is routine in the art as shown by Omelchenko et al. (Fig. 2, Ref. # 32). It would have been obvious to one skilled in the art at the time the invention was made to modify Inada’s invention to include the inboard and outboard registration marks and the positions desired for image on paper registration.

The ordinary artisan would have been motivated to modify Inada’s invention in a manner described above for at least the purpose of providing detection on two sides of the belt, ensuring a more accurate position of the printed image.

Regarding claim 11, Inada teaches, “wherein the lateral correction is used to offset a plurality of registration marks (Fig. 1b, ref. # 960k, 960y, 960m, 960c).”

Regarding claim 12, Inada teaches, “wherein using the lateral correction to offset the registration mark includes: determining the approximate number of pixels that correspond to the required lateral correction (Col. 2, Ln. 24-27); shifting the target position of the registration mark by the approximate number of pixels (claim 5).”

Regarding claim 13, Inada teaches, “wherein detecting the residual error in the lateral location of the registration mark is accomplished by a MOB sensor (Fig. 1b, ref. # 925).”

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Regarding claim 14, Inada teaches, "wherein the method is performed during an image on paper registration process (Title, and Fig. 2, Ref. # 12 (paper))."

***Allowable Subject Matter***

Claim 17 would be allowed if rewritten to overcome the claim objections set forth in this office action.

The following is a statement of reasons for the indication of allowable subject matter: The claimed subject matter, "wherein the lateral target position of the marks is shifted relative to the MOB sensors in each of the initial and second registration modes based upon the measurement of at least one test pattern parameter and at least one imaging error" is allowable over the prior art.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Conrow et al. (6,763,199).

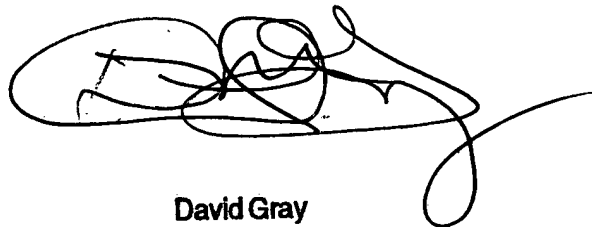
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan D. Walsh whose telephone number is 571-272-2726. The examiner can normally be reached on M-F 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan D. Walsh  
Patent Examiner  
Art Unit 2852



David Gray  
Primary Examiner